

**Patent claims:**

1. A method for identifying an agent that has an inhibitory effect on the complex-formation of an ARE-containing mRNA and an HuR protein comprising:
  - 5 (a) providing a soluble form of a HuR protein, with the proviso that a full-length HuR-glutathione-S-transferase fusion protein is excluded,
  - (b) providing an ARE-containing mRNA,
  - (c) providing a candidate compound,  
wherein at least one of (a), (b) and (c) is labeled,
  - 10 (d) mixing a) and b) in the presence of (c) and in the absence of (c) for a sufficient period of time so that a) and b) can form a complex,
  - (e) detecting the amount of complexes formed in step (d) and/or detect the non-complexed mRNA/protein species,
  - (f) comparing the amount of complexes formed and/or non-complexed mRNA/protein  
15 species found in the presence and in the absence of (c), and
  - (g) choosing an agent which has an influence on the complex formation detected in step (f).
2. The method of claim 1 characterized in that the HuR protein is provided as a homogenous  
20 solution.
3. The method of claim 1 or 2 characterized in that HuR is a soluble form of a recombinant full-length protein or a variant or mutant of a soluble form of a full-length protein.
4. The method of any one of claims 1 to 3 characterized in that the mRNA fragment is  
25 fluorescently labeled.
5. The method of any one of claims 1 to 4 characterized in that the detection method is a fluorescence spectroscopic method selected from the group consisting of Single Molecule Spectroscopy, Fluorescence Correlation Spectroscopy, Fluorescence Intensity Distribution  
30 Analysis, Steady-State Fluorescence Intensity, Fluorescence Anisotropy and Energy Transfer.

6. A screening assay (kit) for identifying an agent that has an inhibitory effect on the complex-formation of an ARE-containing mRNA and an HuR protein comprising as a main component

- 5 a) a soluble form of a HuR protein, with the proviso that a full-length HuR–glutathione-S-transferase fusion protein is excluded,
- b) an ARE-containing mRNA, and
- c) optionally means for detection of the amount of complexes formed between said HuR protein and said ARE-containing mRNA and/or for detection of non-complexed mRNA/protein species.

10 7. A pharmaceutical composition comprising an agent identified by a method according to claim 1 in association with at least one pharmaceutical excipient.

15 8. Use of a pharmaceutical composition according to claim 7 for the treatment of a disorder having an etiology associated with the production of a substance selected from the group consisting of cytokine, growth factor, proto-oncogene or a viral protein, preferably the agent is selected from the group consisting of IL-1, IL-2, IL-3, IL-4, IL-8, GM-CSF, TNF- $\alpha$ , VEGF, AT-R1, Cox-2, c-fos and c-myc.

20 9. A full-length HuR protein of SEQ ID NO:1 or SEQ ID NO:2, wherein the C-terminal amino acid in position 326 is esterified.

10. An isolated RNA sequence motif which is the binding site for HuR.